

WOMEN'S ACTIVITIES AND ENVIRONMENTAL SUSTAINABILITY IN NIGERIA

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Abstract

The activities of women indicate that they are always centered around their environment and thus bringing them nearer to nature than men. Such women - based activities include tilling the land. Fetching of water for domestic uses, fetching of wood for fuel, hawking firewood, mining, reproduction and sanitation among others. Given this development, whenever the environment is degraded, women and their children are the worst hit. Thus, degraded environment means hardships for women and shortage or insufficient natural resources such as clean water, fertile soil, good sanitation and clear air which could result to diseases, illness, reduction in agricultural productivity and poverty. This paper examines the important repercussions which some activities of women bring on the environment and highlights the problems confronting women and environmental sustainability due to environmental degradation and the poverty it exacerbates. The paper concludes with a suggestion of policy measures needed to improve the environment and the quality of life of women.

Introduction

The Nigerian environment faces a lot of challenges and the outlook is poor. The rate at which renewable resources are being exploited is increasing beyond their capacity to regenerate and other women activities are putting stress on the ecosystem. Literatures are unanimous that women perform functions in their surroundings, which put them in close and constant link with both its destruction and protection. Women have always relied on the environment for the provision of most of the environmental resources for their socio-economic activities. Their activities [women] indicate that they are always centred around their environment and thus, bringing them nearer to nature than men. However, an over exploited environment would always spell doom for women, thereby undermining their socio economic activities which in the long run could lead to diseases, reduction in agricultural productivity, loss of amenity and poverty. The exploitation of the environment by women can lead to either environmental degradation [soil degradation, desertification, deforestation, water supply depletion and atmospheric depletion] or economic development through the provision of natural resources. This connection indicates that an environment that is well managed and protected would continue to provide the necessary natural resources for women and for economic development in general, but when the environment is degraded the welfare of women is reduced by ill health and premature mortality, and an impaired health may lower the productivity of women thus reducing the productivity of many resources used directly or indirectly by women. In addition, an endangered environment would not give a clean and quite neighbourhood. The implication of this is deterioration in the quality of life and poverty which goes further to degrade the environment.

Given this relationship, the environment is so important to women that it provides all the natural resources needed for their survival and that of their family. For instance, women in Nigeria are known to be the best exploiters of the environment. Through agriculture, fishing, fetching of water and wood for fuel, they are able to improve the little land available and conserve soil, improve on agricultural productivity, provide drinking water and energy for cooking. Thus, it enables them to increase their income and welfare, thereby enabling them to invest more on the land, manage water resources effectively and distance them away from poverty.

The World Commission on Environment and Development [1987] reiterates that the relationship between women and the environment can be examined at the levels of personal hygiene and the structure and maintenance of the house in terms of its design, capacity and general cleanliness and external habitats of the environment surrounding the house. For instance, at the personal and residential level, women in Nigeria play significant roles in maintaining the quality of the environment. As the custodian of good housekeeping, they see to the basic hygiene of the family, keeping the surrounding clean, which involves bathing the children, clothing and dressing them, sweeping and clearing the surrounding, seeing to the efficient disposal of wastes

and cooking in hygienic surroundings.

Cleaver and Schreiber [1992] opine that a sustainable environment will increase female productivity capable of translating into increasing the aggregate productivity in the whole economy and thus, reduce the incidence and the negative welfare outcome of poverty, reduce fertility rates and increase household demand for health and education services. However, through sustainable environment, the return to female labour will also increase which in turn will help increase the aggregate female income spent on food, health care services and other basic needs. Increasing female productivity through sustainable environment will also increase the opportunity cost of child bearing and thereby strengthening the incentives for families to invest in women's health and education.

Given the natural resource base of Nigeria the level of environmental concern generally, women stand out as the invisible managers of this abundant resource base because of the crucial role they play in the environment as a whole.

Oladipo [1994] and Mitchell [1995] observe that women in developing countries are defactor managers of the local natural resources surrounding them, hence, to a large extent, the availability of resources is critical in determining the extent of poverty. Good or poor management can sustain or severely damage the resources base and contribute to increased poverty

Women's Activities and Environmental Sustainability

their surroundings that could affect the

Some of the roles which women perform in environment positively and negatively, include

- [a] Water extraction/collection.
- [b] Food production.
- [c] Food preparation.
- [d] Reproduction, nursing and education of children.
- [e] Waste generation / production.

- [f] Deforestation.
- [g] Sanitati
- on,
- [h]
- Mining.

Women and Water Extraction /Collection

Households mainly depend on women/girls for water supplies which they fetch almost every day. To procure water, women [especially in rural areas] trek several kilometres of distance. According to Gallen [1994], in many Kenyan households, women/ girls spend five to six hours a day securing the water they need, while in Ethiopia, the task alone can consume eight hours a day to the neglect of their crops. The trekking exercise especially during the dry season when water is scarce and in high demand exerts pressure on the surface by pressing and crushing of the top soil thus making it

to loose cohesion. The surface exposed to such stress is highly vulnerable to erosion. The havoc done by trampling is observed best after the first rain of high intensity following the dry season. The surface flow which is highly torrential tends to pack lose surface soil through the process of erosion which often leads to some bad land topography [Jimoh, 1996]. In Nigeria, [in the rural areas] only women and their daughters know the quality, availability and location of water resources in community during both wet and dry session [Adewale, 1994]. Engelman and Leroy [1993] observe that more than any hydrologist or urban planner, it is women in developing world -the drawers, carriers, and household managers who understand what water scarcity is and what its implications are for families and communities.

The mode and habit of obtaining the water and the various activities performed in the

river put life at a risk. These activities expose the stream to different forms of pollution. Women [especially rural] do a lot of washing activities like washing of cloth, agricultural produce and bathing, all of which reduce stream and river to a little more than open sewers. To wash cloth and bath, various types of soaps, some of which are highly mercuric and poisonous in content are used. The chain effect of this is water pollution emanating from dead aquatic animals which may not only endanger the immediate populace but extend to other villages which may be located along the course of the stream since the impact of pollution on the stream may linger for days.

Women put finishing touches to agricultural activities like harvesting and processing the seeds for storage like the seeds of melon, locust beans, e.t.c. To bring these seeds to storage level, they wash off the waste material. These organic wastes in the river increases the Bio-chemical oxygen demand of the stream. This results in low oxygen content of the water and this aids the growth of water organisms which are disease vectors. Aquatic life is threatened and villagers who have no choice but to use water from streams and rivers are left with these consequences.

The act of collecting water has implications for the environment. First, most women/girls draw their water unsustainably from the most easily accessible sources - rivers, streams, lakes or ponds, aquifer through springs, wells or boreholes that recharge either slowly or rapidly, thereby accelerating the environmental disturbance of the water cycle. Sustainable water resource management requires that hydrological cycle is respected by using renewable water resources that are not diminished over the long-term by that use [Engelman and Leroy, 1993]. Secondly, most sources of water, especially during scarcity are impure leading to frequent outbreak of diseases (like Guinea worm in Nigeria) with enormous implications for the health of the population [Akinyele, 1994].

Women and Food Production

The input of women at various stages of agriculture [subsistence farming] compared to men's input, indicate that women contribute more to labour input at all stages of food production, and women's work increases as men leave the rural areas for paid employment [Tanko, 1995 and Gallen, 1993]. Nigeria is no exception to the above trend, where Tanko [1995] and Adewale [1994] observe that the women's traditional role of planting, weeding, processing, storage and marketing produce, has increased to include the traditional activities of men, because of the withdrawal of men's labour from agriculture to wage sector and movement into cash crop production.

In addition, there is the problem of inadequate extension services which is supposed to educate the women about agricultural practices and environment. Gallen [1993] and Blumberg [1994] stress that only 7% of extension time and resources are devoted to African women farmers, compared to 13% worldwide. Similarly, only 7% of extension agents are female and many of these are even home economists. Blumberg [1994] however notices that innovative programmes are beginning to reach women.

Another dimension of food production is what Adewale [1994] referred to as the picking of fruits, leaves, roots, nuts and vegetables from the forest, but sometimes only directed by the community or season to avoid over exploitation. These activities of women in agriculture have serious implications for the environment. First, women employ smoking trees and slash and burnt methods in clearing for agriculture, leading to loss of ecology and soil erosion. The more farmlands are cleared using these unsustainable techniques, the more the savanna and desertification creep southwards. Conversely, women adopt some sustainable agricultural practices like ecological farming and agric forestry, thereby embracing biodiversity. Mitchell [1995] argues that many women in developing countries have found creativity and resourcefully conserve soil resources by using traditional fallow techniques, allowing the land to rest between plantings, rotating crops, intercropping and mulching. They form cooperatives or organized traditional meetings to deliver and sustain agricultural extension information and resources, leading to increased number of farmers reached and a reduction in the time and expense incurred in traveling to meet individual farmers. Secondly, in the process of excessive tilling and weeding, women loosen

the soil, making it vulnerable to erosion. In contrast, sustainable practices like contouring and bullock ploughing preserve the environment. In checking erosion, women often pile stones and rubbish in sacks in the affected area.

Women and Food Preparation

The role of women in nutrition is very vital to the environment. Women's failure therefore to prepare balanced diet may cause health problems in families, with very negative implications for the population. In preparing food, women spend time processing items including grinding maize, millet and sorghum. This is exhausting physically. They also conserve subsistence food items traditionally, sometimes leading to spoilage, spillage and contamination and rodent between the time of harvest and consumption.

Because of poverty, most women in Nigeria use firewood stove for cooking. This often creates dangers of getting children burnt and in some cases burning the whole house. Akinyele [1994] opines that there are links between cooking and indoor air pollution brought about by smoke from coal or firewood, Stoves may cause respiratory infections and many children in Nigeria that are exposed to smoke from fuel wood often develop bronchitis (due to mother carrying children on their laps or backs while cooking and tending fire). Akinyele [1994] also reveals that children exposed to open fires have higher rate of impaired lung infection and chronic respiratory systems, compared to children not exposed to such pollutants. Furthermore, cooking with children crouched close to fire, often make children to sustain heat damage to eyes. In rural Nigeria, the pollutants affect women themselves especially pregnant ones. In addition, in performing such activities- like grinding of pepper, corn or beans, women use contaminated water, which have negative implications for health. Besides, Akinyele [1994] emphasizes that sometimes food contamination can occur during the food preparation, especially when food handling and transportation practices are unsanitary. The situation is worsened by the fact that women take care of mucus, faeces and urine of children and the preparation of food within the same environment. These all can cause outbreaks of diseases leading to high death rate in the population, which is a major component of the environment.

Women Reproduction, Nursing and Education of Children

Population pressure on the environment involves a relatively large number of people in the family due to increased rates of fertility of women. Population growth increases the need for employment and livelihoods, which exert additional direct pressure on natural resources. More people produce more wastes, which threaten local health conditions and imply additional stress on the earth's

assimilative capacity. Rapid population growth has led to over use of soil resources leading to stagnating or declining yields. Rapid population growth results in overgrazing, deforestation, depletion of water resources and loss of natural habitats which in turn lead to low productivity, low income and increase in poverty rate [World Bank, 1992]. An increase in fertility rate of women and the socio-cultural value of the extended family system can also mar environmental quality as a result of heavy stuffing of the house, with various household possessions and limited amount of space for sleeping, cooking and reserving visitors. High population growth also means a rapidly increasing rate of generation of refuse. Thus, where this is not matched by a rapid and efficient disposal system, problems of waste disposal, air and water pollution are bound to surface. The manner of waste disposition is often inefficient. Some garbage gets piled-up and block drainage channels rendering the residential environment unsightly, unsafe and unhealthy for women and children. Over crowding in economically depressed neighbourhoods facilitates the spread of communicable diseases through these wastes, and puts enormous pressure on shared resources such as kitchen, bathrooms and laundries. The consequence is a worsened health situation, which in turn constrain productivity of those resources upon which the women affected rely on, then poverty sets in [Word Bank, 1994].

Studies by Cleaver and Schreiber [1992] indicate that environmental degradation helps to stimulate demand for children because of heavy workload and severe time pressure on

women. Thus, needs for child labour, especially girls, continue to mount. These girls are kept out of school so as to help them with domestic tasks and tend to many young and have many children during their adulthood. Because family planning services are not very popular and available to rural communities, women cannot determine the number of children they can have, yet in most communities, the social status or prestige accorded a woman depends on the number of children she has [Marcus, 1995]. This practice encourages large family sizes leading to over population/population pressure on community resources, with negative consequences for environmental resources viz—depletion of natural resources, due to land fragmentation, especially if majority of the children are males who have to inherit the father's land. Oladipo [1994] notes that in nursing children over the life cycle, women pass their knowledge of environmental management skills to their children, who constitute the future users of the environment. These women protect their offsprings from diseases linked to the environment such as contaminated water, poor sanitation and malnutrition because parents can neither afford cost of treating such illnesses, nor grow enough food to eat in their over-stretched environment. Unfortunately, sometimes in performing this vital function, some women expose their children to environment-related diseases. The situation is worsened when cleaning children. Women, most of the time, dispose faecal remnants of children with their hands, and use the same hands to prepare food or sell food, thus, serving as a source of infection to the population.

Women and Waste Generation/Production

There are varieties of wastes emanating from women activities. Their contribution to solid waste generation in the form of yam peeling, maize husks, leaves, cans and polythene bags, some of which are dumped in the gutter and contribute to urban floods. Of significance is the chemicalized waste water found all around hair salon [Segnola, 1998]. The women handling children excreta throw the children's faeces into the nearby garbage heap and baby diapers may be washed in basins at stand - pipe in the urban areas. These materials often enter the garbage heaps in the neighbourhoods neatly packed in nylon bags. The indiscriminate disposal of such wastes causes damage to the environment and health of the communities. Thus, environmental damage may occur in the form of ecological disturbance such as pollution and eutrophication of water bodies and deaths of flora and fauna of aquatic or terrestrial systems. It can lead to biodiversity and morbidity or mortality of population. Market purchases by women [corncocks, vegetable wastes, packaged materials, etc] bring in a variety of wastes along. These wastes however contain a lot of valuable resources in the form of nitrogen, phosphorus and potassium. Thus, in actual sense it is the management of wastes that is a problem. For instance, when children are asked to carry out cleaning exercise especially by women, proper supervision is not given to where and how it should be disposed of by the children. Also, indiscriminate dumping of refuse, inefficient collection and disposal of garbage, may contribute to the outbreak of diseases like typhoid, cholera and malaria [Olaore, 1983J.

Women and Deforestation

Poverty has a significant linkage with woodlands and forest depletion in Nigeria as majority of the people, particularly poor (mostly women), depend on wood for cooking. Poverty has led to an almost total dependence of majority of rural women on the forest for livelihood and economic survival. The search for firewood is one of the major causes for deforestation in developing countries and is threatening agricultural sustainability with serious consequences for the rural poor, and is a female job. World Bank [1993] reports that 15-20 million hectares of forest are being consumed annually in developing countries especially in semi arid regions of the world and that some 3 billion people rely on firewood for almost all their household energy [World Resources Institute, 1996]. Major users of firewood are women. Thus, the wide spread deforestation and the extension of agricultural lands into forest areas have increased the burdens especially of female population. They now spent more time and trek longer distances collecting firewood [World Resources Institute, 1996]. This development has forced women to resort to the use of inferior fuel power [more smoke] that is cheaper and easily available e.g cow dung is used in

India, millet and stalks in Baukina Faso, sawdust in some parts of Nigeria. This fuel alternate produces indoor air pollution. Women and children in developing countries who spend hours in unventilated structures are exposed to smoke from cooking stoves. Smoky household fire exposes people to significant health risk and facilitates the spread of acute respiratory infections like bronchitis and pneumonia in children and chronic pulmonary diseases in adults, especially women [Pio and Slandfield, 1987]. Also crop residues and even cowdung is burnt instead of being returned to the soil, thus, reducing soil fertility and water holding capacity. The magnitude of firewood collection is aggravated by the fact that kerosene, gas and electricity are not easily available and affordable. This situation has continuously resulted in the depletion of forest reserves for fuelwood.

Wrong value or pricing of fuel increases the demand for firewood because it is collected freely. Forest depletion has increased in areas that firewood cost has increased. Yet, fuelwood remains the most affordable option. High fuelwood prices appear also to be responsible for an increase in the illegal extraction and sale of firewood by the rural poor which increases income in the short run but with reduced agricultural productivity and fuel resources.

When the surface is stripped bare, it becomes highly vulnerable to erosion by wind and water, it renders soil bare thus increasing the surface albedo and making the atmosphere warmer, the condition which favours cloud dispersal hence low rainfall. Deforestation accelerates wind speed, which have often resulted in hazards related to settlement and agriculture. Houses and other properties have been lost through such environmental mishaps [Gbadegesin and Oyelaran, 1995]. When forest is removed, the surface is exposed to direct heat from sun, destroying shade-loving soil micro and macro organisms. Droughts can become longer while rainfall becomes heavier over short period, consequently storming and floods become more severe and eventually famine might set in leading to death.

To conserve forests, women are known to resort to collecting deadwood and involve in tree planting for economic purposes or to either minimize desertification and over exploitation and to prevent soil erosion.

Women and Sanitation

The problem of waste disposal has become one of the most intractable environmental problems facing many cities in Nigeria. In recent years, there has been a phenomenal increase in the volume of waste generated daily in the country. This is due to a number of reasons including increasing rate of population growth, increasing urbanization, industrialization and general economic growth. Women are responsible for dumping and collection of refuse. Government has the responsibility for sanitation of communities and cities and women play an important role because they are primarily responsible for home sanitation. More interestingly, an increasing number of women are employed in cleaning market squares, churches and urban streets. Similarly, the National Environmental Sanitation programme in Nigeria depends on women for its success. Gbadegesin [1994] assesses the level of participation among household members in Ibadan and revealed gender bias in the levels of participation among residents of medium and high density residential zones of Ibadan, stating that women and female children are more active in the environmental sanitation programme.

Women and Mining

Mining whose activities sometimes produce undesirable effects on the environment is one of the activities performed by women. Women engage in sculpture work, which involves the use of different types of soils. Earthen ware vessels such as pots are produced locally using clay as raw material. Advancement in technology has improved the quality and types of such vessels produced. For instance, ceramic plates, cups, pots and ornamental vessels are manufactured by process of strong heating of clay [Olanrewaju, 2000]. Women in rural areas mine sand for various constructional purposes. Erosion of greater magnitude and of geomorphic significance consequent of women activities has been observed in mining sites, which poses threat to man's physical environment. Mining by women and its associated activities are also sources of a considerable damage to surface water, ground water, land and the existence of mining wastelands.

Recommendations

Based on the foregoing analysis, the following recommendations need to be given attention in Nigeria in the area of women environmental activities and sustainability:

1. There is the need to involve women in environmental management. Such an involvement should consist of environmental education and awareness to educate Nigerian women about the imperatives of sustainable land management specially designed for the women at all levels as individuals and groups/ associations. In implementing the involvement, there is the need to incorporate the law enforcement agents.
2. There is the need to formulate and enforce a comprehensive national policy on environmental related challenges. The focus should be to promote integrated ecosystem and environmentally sound management for agricultural activities, soil and water conservation, rural development and coastal resources management. There is the need for reforestation and existing erosion sites need to be urgently stabilized to stem the rate of land degradation and loss of land resources.
3. There is the need for policy reforms **that** alleviate women capital and labour constraints in order to utilize land for increased food production sustainability.
4. Researches should be intensified on how to involve women in environmental management and in farming programmes that could help promote development efforts, most especially towards improving the quality of their environment and needs and the implementation at the monitoring of environmental policies that affect them.

Conclusion

Development will only be meaningful if it does not increase a country's vulnerability to environmental impacts. Sustainable development is that which gives due attention to economic and technological progress and yet does not sacrifice natural resource productivity. The obvious path to make development sustainable in Nigeria is to fully integrate women environmental activities and concerns into socio-economic development and ensure that relevant environmental policies are not only put in place but also effectively implemented. The relationship between the environment and women is two ways. The quality of the environment is itself part of the improvement in welfare and productivity of women. Environmental damage can always undermine both the present and future productivity of women. To guide against the present and future environmental degradation, calls for environmental sustainable policies which seek to improve environmental stewardship and those that seek to stop environmentally damaging behaviour of women. Sustainable environmental management demands that opportunities be created for women to translate their positive knowledge and energies of preserving their surrounding into action while those of destruction discouraged.

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